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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,720	12/20/2001	Frank Gasparik	01-966	9781

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LSI LOGIC CORPORATION
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EXAMINER

HUYNH, KIM T

ART UNIT PAPER NUMBER

2112

DATE MAILED: 07/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,720

Applicant(s)

GASPARIK, FRANK

Examiner

Kim T. Huynh

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by
Gasparik (US Patent 6,483,354)

As per claim 1, Gasparik discloses a PCI-X DDR driver for providing internal termination to a transmission line, comprising:

- a driver control; (col.4, lines 40-48)
- a plurality of N-channel devices, the plurality of N-channel devices being divided into at least two groups; and (col.4, lines 40-58)
- a plurality of P-channel devices, the plurality of P-channel devices being divided into at least two groups, wherein the driver control is suitable for individually controlling selected ones of the groups of N-channel and P-channel devices on or off for providing internal termination to the transmission line. (col.1, lines 50-53), (col.4, lines 40-58)

As per claims 2, 13, Gasparik discloses wherein the driver control controls selected ones of the groups of N-channel and P-channel devices on or off for

providing one of pull-up type termination, pull-down type termination, and symmetric type termination to the transmission line. (col.4, lines 40-58), (col.6, lines 26-46)

As per claims 3, 14, Gasparik discloses wherein the driver control enables selected ones of the groups of P-channel devices for providing pull-up termination. (col.6, lines 26-46)

As per claims 4, 15, Gasparik discloses wherein the transmission line includes a transmission line end having a terminator impedance, and wherein the terminator impedance is connected to a power supply VDD. (col.4, lines 49-58), (col.6, lines 26-46)

As per claims 5, 16, Gasparik discloses wherein the driver control enables selected ones of the groups of N-channel devices for providing pull-down termination. (col.6, lines 26-46)

As per claims 6,17, Gasparik discloses wherein the transmission line includes a transmission line end having a terminator impedance and wherein the terminator impedance is connected to a system ground VSS. (col.6, lines 26-46)

As per claims 7, 18, Gasparik discloses wherein the driver control enables selected ones of the groups of both P-channel and N-channel devices for providing symmetric termination. (col.5, lines 43-51)

As per claims 8,19, Gasparik discloses wherein the transmission line includes a transmission line end having a terminator impedance and wherein the terminator impedance is connected to both a power supply VDD and a system ground VSS.

(col.6, lines 38-51)

As per claims 9, 20, Gasparik discloses wherein the driver control includes an impedance controller for correcting process/voltage/temperature effects. (col.2, lines 53-57)

As per claims 10, 21, Gasparik discloses wherein a size of at least one of the groups of N-channel and P-channel devices has its size weighted to provide an output impedance for given process/voltage/temperature conditions. (col.4, lines 31-39)

As per claims 11,22, Gasparik discloses wherein the size of at least one of the groups of N-channel and P-channel devices has its size weighted in conjunction with a discrete resistor. (col.5, lines 6-27)

As per claim 12. Gasparik discloses PCI-X DDR system, comprising:

- a transmission line; and (col.5, lines 61-67)
- driver for providing internal termination to the transmission line, the driver including: (col.6, lines 16-25)
- a driver control; (col.4, lines 40-48)
- a plurality of N-channel devices, the plurality of N-channel devices being divided into at least two groups; and (col.4, lines 40-58)
- a plurality of P-channel devices, the plurality of P-channel devices being divided into at least two groups, wherein the driver control is suitable for individually controlling selected ones of the groups of N-channel and P-

channel devices on or off for providing internal termination to the transmission line. (col.4, lines 40-58), (col.1, lines 50-53)

As per claim 23, Gasparik discloses a PCI-X DDR driver for providing internal termination to a transmission line, comprising:

- a plurality of N-channel devices, the plurality of N-channel devices being divided into at least two groups; (col.4, lines 40-58)
- a plurality of P-channel devices, the plurality of P-channel devices being divided into at least two groups; (col.4, lines 40-58)
- means for individually controlling the groups of N-channel and P-channel devices; (col.4, lines 40-58)
- wherein the controlling means is suitable for individually controlling selected ones of the groups of N-channel and P-channel devices on or off for providing internal termination to the transmission line. (col.4, lines 40-58)

Conclusion

3. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM- 6:30PM.*

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.

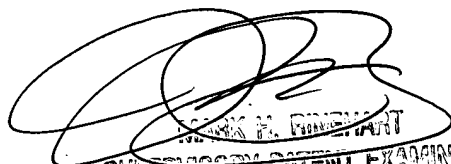
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5631.

Kim Huynh

June 20, 2004



MARK H. RINGHART
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